



JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

May 15, 2008

Dr. James Patten  
Red Leaf Resources, Inc.  
6985 Union Park Center Suite 375  
Cottonwood Heights, Utah 84047

Subject: Permit to Commence Small Mine, Red Leaf Resources, RLR Site #6, S/047/0096, Uintah County, Utah

Dear Dr. Patten:

The Division finds your notice of intention (Notice) complete and approves the reclamation surety for the "RLR Site #6" mine. You are now permitted to conduct small mining operations on 5.0 acres as outlined in the Notice provided you have written approval from any other applicable federal, state or local agency.

Please keep in mind the following regulatory requirements.


- The Division must be notified no later than 30 days after beginning mining operations.
- Mining disturbance is only allowed in the area identified in the Notice and Reclamation Contract.
- Stockpiling topsoil material prior to beginning activities will help ensure successful revegetation. Even the first few inches of undeveloped material are worth saving to aid in later revegetation efforts, and future regulatory surety release.
- If you encounter any archaeological or historical items, you are asked to notify this office and State History of your find.
- Permit fees are due July 30.
- Annual reports are due by December 31st.
- The reclamation surety will be reviewed every 3 years.
- The Division request that the disturbed area boundary (including assess/haul roads) be marked with metal T-posts to identify the area permitted for mining.

A variance to the operation and reclamation practices was not requested with the NOI received on February 22, 2008.

Page 2 of 2  
RLR Site #6  
S/047/0096  
May 15, 2008

The Division's web page at <http://ogm.utah.gov/> under the Mining Program has a link to the rules you are expected to operate under and other information to assist you in complying with program requirements. Thank you for your cooperation. In reply, please refer to file number S0470096. If you have questions or concerns regarding this letter, please contact me at (801) 538-5258 or Leslie Heppler at (801) 538-5257. Best wishes with your mining venture.

Sincerely,

A handwritten signature in black ink that reads "Susan M. White". The signature is fluid and cursive, with the first name "Susan" being more prominent than the last name "White".

Susan M. White  
Mine Program Coordinator  
Minerals Regulatory Program

SMW:lah:pb  
Task ID#2291  
Attachment: Approved SMO Notice  
Enclosure: Copy of RC & surety forms  
P:\GROUPS\MINERALS\WP\M047-Uintah\S0470096-RLR6\final\apvl-SMO-NOI-suretyS0470096-05-13-08.doc

This Section for DOGM Use:

Assigned DOGM File No.: S 0470096  
DOGM Lead: Jan Morse  
Permit Fee \$ 190<sup>00</sup> Ck # 1675

Task ID# 2256

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING  
1594 West North Temple Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801  
Telephone: (801) 538-5291 Fax: (801) 359-3940

**NOTICE OF INTENTION TO COMMENCE SMALL MINING OPERATIONS**

The informational requirements of this form are based on provisions of the Mined Land Reclamation Act, Title 40-8, Utah Code Annotated 1987, and the General Rules as promulgated under the Utah Minerals Regulatory Program.

"Small Mining Operations" mining operations which have a disturbed area of five or less surface acres at any time.

\*\*\*\*\*

**I. GENERAL INFORMATION (Rule R647-3-104)**

1. Name of Mine: RLR Site #6
2. Legal name of entity (or individual) for whom the permit is being requested: Red Leaf Resources, Inc.  
Mailing Address: 6985 Union Park Center, Suite 375  
City, State, Zip: Cottonwood Heights, Utah 84047  
Phone: 801-878-8100 Fax: 801-878-8101  
E-mail Address: jpatten@ecoshale.com  
Type of Business: Corporation (X) LLC ( ) Sole Proprietorship (dba) ( )  
Partnership ( ) General \_\_\_\_\_ or limited \_\_\_\_\_  
Or:  
Individual ( )

**Entity must be registered (and maintain registration) with the State of Utah, Division of Corporations (DOC) [www.commerce.utah.gov](http://www.commerce.utah.gov).**

Are you currently registered to do business in the State of Utah? X Yes No

Entity # 6542120-0143

If no, contact [www.commerce.utah.gov](http://www.commerce.utah.gov) to renew or apply.

Local Business License # (if required)

Issued by: County \_\_\_\_\_ or City \_\_\_\_\_

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**FEB 25 2008**  
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3. **Contact Person(s)**  
Name: Dr. James W. Patten Title: CEO  
Address: 6985 Union Park Center, Suite 375  
City, State, Zip: Cottonwood Heights, Utah 84047  
Phone: 801-878-8100 Fax: 801-878-8101  
Emergency, Weekend, or Holiday Phone: \_\_\_\_\_  
E-mail Address: jpatten@ecoshale.com

**Contact person to be notified for: permitting (X) surety (X) Notices (X) (please check all that apply)**

Name: Same as above Title: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Emergency, Weekend, or Holiday Phone: \_\_\_\_\_  
E-mail Address: \_\_\_\_\_

**Contact person to be notified for: permitting ( ) surety ( ) Notices ( ) (please check all that apply)**

Registered Utah Agent (as identified with the Utah Department of Commerce) (if individual leave blank):

Name: Todd Dana  
Address: Same as above  
City, State, Zip: \_\_\_\_\_  
Phone: 801-878-8100 Fax: 801-878-8101  
E-mail Address: td@ecoshale.com

**Other**

Name: Laura Nelson  
Address: Same as Above  
City, State, Zip: \_\_\_\_\_  
Phone: 801-878-8105 Fax: 801-878-8101  
Email: lnelson@ecoshale.com

4. **If Business is a: Sole Proprietor:**

**Sole Proprietor:**  
Name of Owner: \_\_\_\_\_ Title: \_\_\_\_\_  
Business Address: \_\_\_\_\_  
City, State, Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
E-mail Address: \_\_\_\_\_

**If Business is a Corporation:**

**Name of Officers:**

Dr. James W. Patten

Title: President, CEO

Todd Dana

Title: Chairman, COO

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Headquarters Address: 6985 Union Park Center, Suite 375

City, State, Zip: Cottonwood Heights, Utah 84047

Headquarters Phone: 801-878-8100

Fax: 801-878-8101

E-mail Address: jpatten@ecoshale.com

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**If Business is a Limited Liability Company:** Member Managed ( ) Manager Managed ( )

**Name of 1st Member/Manager:** Title:

**Business Address:**

City, State, Zip:

Phone: Fax:

E-mail Address:

**Name of 2nd Member/Manager:**

**Business Address:**

City, State, Zip:

Phone: Fax:

E-mail Address:

**If Business is a Partnership:**

**Name of Partner:**

**Business Address:**

City, State, Zip:

Phone: Fax:

E-mail Address:

5. **Ownership of Land Surface:**

Private (Fee) ( ) Public Domain (BLM) ( ) National Forest (USFS) ( )

State Trust Land/School Sections (X) State Sovereign Lands ( )

Other (please describe): \_\_\_\_\_

Name Address

Name Address

Name Address

6. **Ownership of Minerals:**

Private (Fee) ( ) Public Domain (BLM) ( ) National Forest (USFS) ( )

State Trust Land/School Sections (X) State Sovereign Lands ( )

Other (please describe): \_\_\_\_\_

Name Address

Name Address

Name Address

BLM Lease or Project File Number(s) and/or USFS assigned Project Number(s):

BLM Claim Number(s):

Utah State Lease Number(s): 50151 \_\_\_\_\_

Name of Lessee(s): Red Lead Resources, Inc.

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7. **Have the above surface and mineral owners been notified in writing?**

Yes (X) No ( )

If no, why not?

*Please be advised that if State Trust Lands are involved, notification to the Division of Oil, Gas and Mining alone does not satisfy the notification requirements of Mineral Leases upon State Trust Lands. Exploration or mining activity on State Trust Lands requires a minimum of*

60 days notice to the Trust Lands Administration **prior** to commencing any activities. Please contact the School Institutional Trust Lands Administration (SITLA) at (801) 538-5508 for notification requirements.

8. Does the Entity have legal right to enter and conduct mining operations on the land covered by this notice? Yes (X) No ( )

II. **PROJECT LOCATION & MAP** (Rule R647-3-105)

1. **Project Location** (legal description):

County(ies): Uintah

E 1/2, of NW 1/4, of NW 1/4: \_\_\_\_\_

1/4, of 1/4, of 1/4: Section 16: Township 13 S: Range: 25 E

1/4, of 1/4, of 1/4: Section: Township: Range:

UTM East: 660444.8 UTM North: 4395332.4

Name of Quad Map for Location: \_\_\_\_\_ Davis Canyon \_\_\_\_\_

2. **Location and Operations maps** must be plotted at a scale to accurately identify locational landmarks and operations details. All maps must include a north arrow, a scale, appropriate labels, title box including the mine name, township, range and section.

a. **Map 1:** The **general location map** must be the scale of a USGS 7.5 minute series map or equivalent (1"=2000') and identify new or existing access roads. **ATTACHED Figure 1**

b. **Map 2:** The **operations map** (1"=200' or other scale as determined necessary by the Division) must be labeled and identify: **ATTACHED Figure 2**

- i. The area to be disturbed;
- ii. The location of any existing or proposed operations including access roads, drill holes, trenches, pits, shafts, cuts, or other planned activities; and
- iii. Any adjacent previous disturbance for which the operator is not responsible.

(Contact the Division for a list of consultants and land surveyors for mapping assistance.)

3. The proposed (5 acre or less) disturbed area (including access/haul roads) should be marked ON THE GROUND with metal T-Posts (or with some other marker of equal effectiveness). Markers should be appropriately spaced (<50 feet) so that the next marker in either direction is clearly visible with the naked eye.

III. **OPERATION PLAN** (Rule R647-3-106)

1. **Type of mining:** Surface (X) Underground ( )

2. **Mineral(s) to be mined:** Oil Shale

3. **Amount of material to be extracted, moved or proposed to be moved:**

A total of 70,000 cubic yards, inclusive of overburden, will be moved for the first capsule and the extracted ore replaced into the excavated pit and the overburden replaced over the enclosed capsule. A total of 70,000 cubic yards will also be extracted and replaced for the second cell, for a total of 140,000 cubic yards of material moved at the site.

4. **Will any water, liquid chemicals, reagents, or other solutions be used, produced or discharged as part of the mining or milling process?**

Yes ( ) No ( X ) If yes, please describe (add extra pages if needed)

5. **Provide a brief description of the proposed mining operation and onsite processing facilities** (add extra pages if necessary). **ATTACHED Figure 3.**
6. ( ) **New Road(s):** Length (ft) \_\_\_\_\_ Width (ft) \_\_\_\_\_
7. (X) **Improved Road(s):** Provide a description of the improvements that need to be made to existing roads to access the site, including the Length (ft) and Width (ft) of improvements.  
Existing road: Atchee Ridge Road  
Length (ft) 30 Width (ft) 30
8. **Total project surface acreage to be disturbed: (5 acres) PLEASE SPECIFY EXACT ACREAGE - (this will be used to determine surety bond amount – see #VI).**
9. **Proposed startup date of project** (month, year): May 2008
10. **Proposed completion date of project, if known** (month, year) November 2012

**IV. OPERATION AND RECLAMATION PRACTICES (Rule R647-3-107, 108 & 109)**

The reclamation and operation obligation is to keep the area clean and safe, minimize hazards to public safety, return the land to a useful condition, and reestablish at least 70 percent of the premining vegetative ground cover. To accomplish this, the Permittee / Operator will need to perform reclamation concurrently, or at the completion (within one (1) year) of mining. Please refer to The Practical Guide to Reclamation in Utah, available at [www.ogm.utah.gov](http://www.ogm.utah.gov).

1. *Keep the mining operation in a safe, clean, and environmentally stable condition.*
2. *Permanently seal all shafts and tunnels to prevent unauthorized or accidental entry.*
3. *Plug drill holes with a five foot cement surface plug. Holes that encounter fluids are to be plugged in the subsurface to prevent aquifer contamination.*
4. *Construct berms, fences, or barriers, when needed, above highwalls and excavations.*
5. *Remove, isolate, or neutralize all toxic materials in a manner compatible with federal and state regulations.*
6. *Remove all waste or debris from stream channels.*
7. *Dispose of any trash, scrap metal, wood, machinery, and buildings.*
8. *Conduct mining activities so as to minimize erosion and control sediment.*
9. *Reclaim all roads that are not part of a permanent transportation system.*
10. *Stockpile topsoil and suitable overburden prior to mining.*
11. *Stabilize highwalls by backfilling or rounding to 45 degrees or less, where feasible; reshape the land to near its original contour, and redistribute the topsoil and suitable overburden.*

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12. Properly prepare seedbed to a depth of six inches by pocking, ripping, discing, or harrowing. Leave the surface rough.

13. Reseed disturbed areas with adaptable species. (The Division recommends a mixture of species of grass, forb, and browse seed, and will provide a specific species list if requested.)

14. Plant the seed with a rangeland or farm drill, or broadcast the seed. Fall is the preferred time to seed.

**V. VARIANCE REQUEST (Rule R647-3-110)**

**Any variance request must be approved in writing by the Division**

Yes ( ) No (X)

Any planned deviations from Rules R647-3-107, Operation Practices, R647-3-108, Hole Plugging Requirements, or R647-3-109, Reclamation Practices, as summarized above (see **IV. Operation and Reclamation Practices** Item # 1-14), should be identified below listing applicable rule number. Give justification for the variance(s) and alternate methods or measure to be utilized. A variance shall be granted if the alternative method or measure proposed will be consistent with the Act.

**1st Variance Requested**

Item # \_\_\_\_\_ Applicable Rule # (i.e. R647-3-109.10 (if you did not want trenches & pits reclaimed) \_\_\_\_\_  
Justification: \_\_\_\_\_  
Alternate methods or measure to be utilized: \_\_\_\_\_

**2nd Variance Requested**

Item # \_\_\_\_\_ Applicable Rule # \_\_\_\_\_  
Justification: \_\_\_\_\_  
Alternate methods or measure to be utilized: \_\_\_\_\_

**3rd Variance Requested**

Item # \_\_\_\_\_ Applicable Rule # \_\_\_\_\_  
Justification: \_\_\_\_\_  
Alternate methods or measure to be utilized: \_\_\_\_\_

**Attach additional page if more variances are requested.**

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**VI. SURETY (Act 40-8-7(1)[c])**

**A reclamation contract and surety must be provided to and approved by the Division prior to commencement of operations.**

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The Utah Mined Land Reclamation Act (40-8-7 (1)[c] and 40-8-14 provides the authority that all mining operations furnish and maintain reasonable surety to guarantee that the land affected is reclaimed.

The surety amount is based on the nature, extent and duration of operations. *The surety amounts are based on data from current large mine surety and are used as a general guide, along with actual site conditions.*



Surety for small mines sites will be escalated three (3) years to the future.  
Contact the Division for dollar amount required for this project.

*JLP* will provide surety in the form of a: Certificate of Deposit, Letter of Credit, Surety Bond, Cash (certified funds), or Division Approved form.

**VII. PERMIT FEE [Mined Land Reclamation Act 40-8-7(1)(i)]**

The Utah Mined Land Reclamation Act of 1975 [40-8-7(1)(i)] provides the authority for the assessment of permitting fees. Commencing with the 1998 fiscal year (July 1 - June 30), permit fees are assessed to new and existing notices of intention, and annually thereafter, until the project disturbances are successfully reclaimed by the Permittee / Operator and released by the Division.

***Small Mine Notices require a \$150.00 fee which must accompany this application or it cannot be processed by the Division.***

**VIII. SIGNATURE REQUIREMENT**

**(Please check the box if applicable and place your initials on the line provided)**

*(X)* *JLP* I have enclosed the required permit fee.

*JLP* I understand that I am not authorized to create any surface disturbance until the surety amount is posted and approved in writing from the Division of Oil, Gas and Mining and any other authorized regulatory agency.

**CERTIFICATION**

I state under penalty of perjury under the laws of the state of Utah and the United States of America that:

*JLP* a. I have read this form and declare the information, statements and/or documentation are true, correct and complete to the best of my knowledge and belief; AND

*JLP* b. I commit to the reclamation of the aforementioned small mining project as required by the Utah Mined Land Reclamation Act (40-8) and the rules as specified by the Board of Oil, Gas and Mining.

*JLP* c. **This certification must be executed by an executive officer if the applicant is a corporation; by a partner if applicant is a partnership (general or limited); owner if applicant is a sole proprietorship; member or manager if applicant is a limited liability company.**

Signature: *James W. Patten* Date: *2/22/08*

Name (typed or printed): Dr. James Patten,

Title/Position (if applicable): President & CEO

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NOTICE OF INTENT  
TO CONDUCT SMALL MINING ACTIVITIES  
ML 50151

Red Leaf Resources, Inc. (Red Leaf) provides this Notice of Intent to Conduct Small Mining Activities on trust lands managed by the State and Institutional Trust Lands Administration (SITLA), pursuant to the Division of Oil Gas and Mining Rule R 647-3, Small Mining Operations.

In support of this NOI, Red Leaf offers the following information consistent with the format identified in the Department of Oil Gas and Mining Notice of Intent instructions:

1. The subject of this Notice is the SITLA mineral lease ML 50151, owned by Red Leaf Resources, Lessee, Inc., 6985 Union Park Center, Suite 375, Cottonwood Heights, Utah, 84047. The lands proposed small mining operations in this Notice are located in the E 1/2 of NW 1/4, of NW 1/4, of Section 16, Township 13 South, Range 25 East. A location map showing the area proposed for mining operations and the operations map are attached to this filing as Figure 1.0 Site 6 and, Figure 2.0 Site 6.
2. The mining excavation work proposed is for low depth surface mining. The excavation will be conducted by a Caterpillar 330 excavator, a Caterpillar D8 bulldozer and the Caterpillar 966 frontend loader. The contact information for the excavation contractor is Roger Chapman, Chapman Construction, Roosevelt, Utah (phone # 435-722-3800).
3. No privately owned surface land will be affected by the proposed mining activities.
4. Uintah County zoning regulations show the proposed exploration area to be within the M&G-1 zone. Underground and surface mining are conditional uses within the M&G-1 zone. Red Leaf Resources will submit a Conditional Use Permit Application to the county and will notify DOGM and SITLA of the outcome of that application when received.
5. Red Leaf has also filed a Notice of Intent to Conduct Small Mining Activities with State Institutional Trust Lands. This is provided as Attachment A.
6. The mineral deposits to be developed are oil shale deposits. The proposed activities include: site preparation; removal of overburden; excavation of oil shale; construction of earthen capsule; replacement of oil shale and overburden. The depth from the surface to the top of the oil shale deposits on the site is approximately 20 feet. The oil shale deposits on the site are roughly 65 feet in depth.
7. The topography of the exploration area is relatively flat with rolling hills. The vegetative cover on the site is predominantly grass/sagebrush community with interspersed stands of pinion and juniper. No water bodies are present on the site.
8. No structures are present on the mining site. There is an access leading to the property. The closest county road is Atchee Ridge Road, a primary road. Red Leaf Resources will contract with the county to do any required maintenance on the road. Road maintenance and reclamation will be done in accordance with SITLA's requirements for road stabilization and reclamation.

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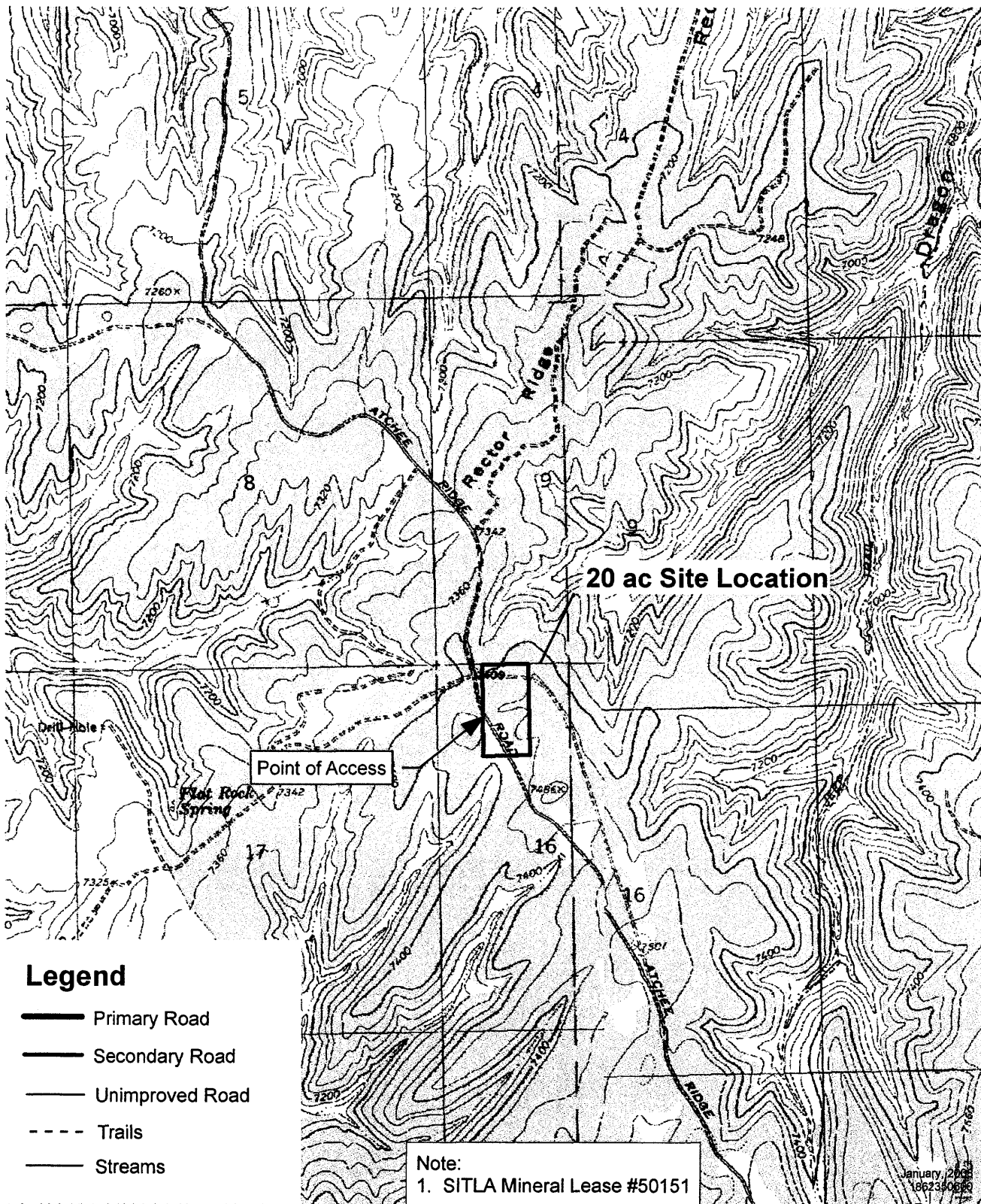
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9. To the best of Red Leaf's understanding and site review, there appear to be no pre-existing, un-reclaimed, surface or underground mining disturbances located on the site.
10. Red Leaf has identified a 5 acre disturbance on the site. The proposed area for mining is 3 acres, comprised of two excavation areas each 1.5 acres in size. Excavations will not be done simultaneously. The first 1.5 acre excavation will be prepared, lined with an impermeable barrier, fitted with metal pipes and the ore deliberately place back in the impound. The liner will be placed over the top of the mound and the overburden replaced and reseeded. This process of excavation and replacement will take approximately 90 days. Three (3) acres of the area will be used to store the shale and overburden during the construction phase. Once the first cell is completed the second excavation will be initiated with the displaced overburden and mined shale similarly stored on the remaining acres. Once pits are completed, there is no further need to excavate on the site. The areas identified are inclusive of all areas needed for equipment, staging, stockpiling, processing, and structures on site.
11. RLR will drill one core hole within the 5 acre site (reference Figure 2, Site 6).
12. On site gas burners used for heating will be on skids and removable at the end of the operations. No permanent structures will be erected.
13. Figure 2.0 Site 6 shows the exploration site and the proposed area of disturbance for the capsule construction. This location is inclusive of equipment. Figure 3.0 Site 6 depicts a generic site arrangement.
14. Red Leaf is currently conducting an exploration project, Southwest #1, in accordance with its permit for Exploration and Reclamation issued October 24, 2007. As part of that process, Red Leaf will be identifying appropriate markets, haul routes, production targets, sales prices and potential for annual sales. Once collected, this data will be provided to the Division of Oil Gas and Mining.
15. Exact tonnage and volume on the site will de determined based on ore density at the site and reported to the Division of Oil Gas and Mining.
16. Red Leaf Resources will conduct reclamation consistent R647-3-109.

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**Stantec**

**Stantec Consulting Inc.**  
3995 S 700 E, Ste. 300  
Salt Lake City, Utah  
84107-2540  
Tel. 801.261.0090  
Fax 801.266.1671  
www.stantec.com

N



**Graphic Scale**  
0 2,000  
(in feet)

1 inch equals 2,000 feet

Rev 2 Changes per DOGM  
2008.02.28

Client/Project  
Red Leaf Resources  
Eco-Shale Capsule

Figure No.

**1.0**

Title

**Site Location Map**

**Site 6**

**Sec. 16, T 13 S, R 25 E**

**E½ NW¼ NW¼**

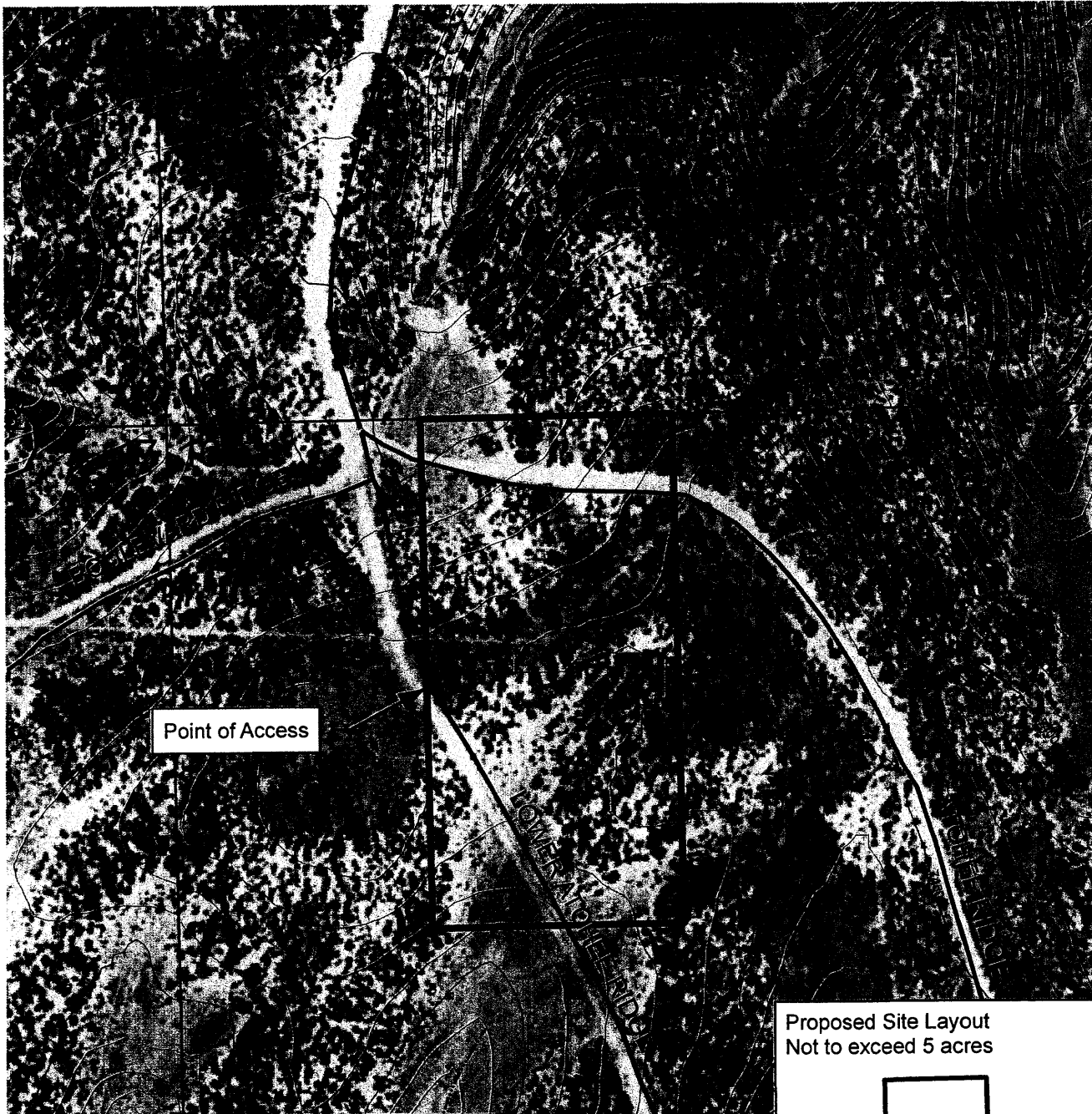
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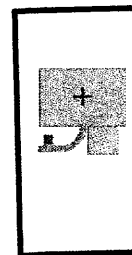


# Legend

- |                 |   |                     |
|-----------------|---|---------------------|
| — Primary Rd    | + | Proposed Borehole   |
| — Secondary Rd  | □ | 10 ac Site Location |
| — Unimproved Rd | ■ | Access Rd           |
| - - - Trail     | ■ | Capsule             |
| --- Stream      | ■ | Office              |
|                 | ■ | Storage Bldg        |

Note:  
1. SITLA Mineral Lease #50151

Proposed Site Layout  
Not to exceed 5 acres



1 inch equals 1,000 feet



**Stantec**

**Stantec Consulting Inc.**  
3995 S 700 E, Ste. 300  
Salt Lake City, Utah  
84107-2540  
Tel. 801.261.0090  
Fax 801.266.1671  
www.stantec.com

**Graphic Scale**  
0 400  
(in feet)  
1 inch equals 400 feet

Rev 2 Changes per DOGM  
2008.02.28

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Client/Project  
Red Leaf Resources  
Eco-Shale Capsule

Figure No.  
**2.0**

Title  
**Operations Map  
Site 6**

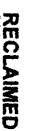
**Sec. 16, T 13 S, R 25E  
E½ NW¼ NW¼**

**CONFIDENTIAL**

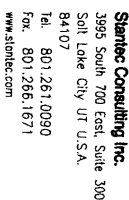
2007 01 13 2003

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**MAY 13 2008**



**Stantec Consulting Inc.**  
3395 South 700 East, Suite 300  
Salt Lake City UT U.S.A.  
84107  
Tel. 801.261.0090  
Fax. 801.266.1671  
[www.stantec.com](http://www.stantec.com)

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**PRECISION SYSTEMS  
ENGINEERING, INC.**  
9805 South 500 West  
Sandy, Utah 84070 USA

5' CONTOURS

☐ 100 KVA GEN SETS



### FUEL AND PRODUCT STORAGE

## WILSONVILLE BOON WENT SINGING AND LAYDOWN

OFFICE TRAILER



### ROADWAYS

1. THIS DRAWING SHOWS MINING INTENT AND WILL ADJUSTED AS APPROPRIATE EACH SITE.

2. UPON COMPLETION OF SITE WORK 12" OF TOPSOIL WILL BE PLACED OVER THE SITE, EXCEPT ROADS WHICH WILL BE RESTORED TO PREVIOUSLY EXISTING CONDITIONS.

[illegible]

File Name: 50600c-103d1	KFB	KJS	DJD	07:2:14
	Dwn	Chkd	Dscrn	YY MM DD



**REDleaf**  
RESOURCES

**Client/Project**  
**RED LEAF RESOURCES, INC**  
**ECO-SHALE PROJECT**  
**TYPICAL 5 ACRE PRODUCTION SITES**  
**FOR CAPSULE AREA**  
**Utah County, UT U.S.A.**

**Title**  
**GENERIC CAPSULE SITE LAYOUT**  
**PLAN AND PROFILE**  
**FOR USE WITH SITES #1, 3, 4, 6, 7, 8, & 9**

Project No.

 $1'' = 60'$

**STATE OF UTAH**  
**DEPARTMENT OF NATURAL RESOURCES**  
**DIVISION of OIL, GAS and MINING**  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801  
(801) 538-5291  
Fax: (801) 359-3940

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**APR 21 2008**

DIV. OF OIL, GAS & MINING

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**SMALL MINE RECLAMATION CONTRACT**

This Reclamation Contract (hereinafter referred to as "Contract") is entered into between **Red Leaf Resources, INC.** the "Operator" and the Utah State Division of Oil, Gas and Mining ("Division").

WHEREAS, Operator desires to conduct mining operations under Notice of Intention (NOI) File No. **S/047/096** which the Operator has filed with the Division and has been determined by the Division to be complete (Complete NOI) as required by the Utah Mined Land Reclamation Act, Sections 40-8-1 et seq., Utah Code Annotated, (2005, as amended) (hereinafter referred to as "Act") and the regulations adopted pursuant to the Act; and

WHEREAS, Operator is obligated to reclaim the lands affected by the mining operations in accordance with the Act and the regulations, and is obligated to provide a surety in a form and amount approved by the Division or the Board of Oil, Gas and Mining (Board) to assure reclamation of the lands affected by the mining operations.

NOW, THEREFORE, the Division and the Operator agree as follows:

1. Operator agrees to promptly reclaim in accordance with the requirements of the Act and applicable regulations, as they may be amended, all of the lands affected by the mining operations conducted or to be conducted pursuant to a Complete Notice of Intention.
2. The Lands Affected by the mining operations and subject to the requirements of the Act and this Contract include:
  - A. All surface and subsurface areas affected or to be affected by the mining operations including but not limited to private on-site ways, roads, railroads; land excavations; drill sites and

workings; refuse banks or spoil piles; evaporation or settling ponds; stockpiles; leaching dumps; placer areas; tailings ponds or dumps; work, parking, storage, and waste discharge areas, structures, and facilities; and

- B. All mining disturbances regardless of discrepancies in the map and legal description, unless explicitly and clearly identified as EXCLUDED on maps, and legal descriptions included in the Complete NOI; provided lands may be excluded only if: (1) they were disturbed by mining operations that ceased prior to July 1, 1977; (2) the lands would be included but have been reclaimed in accordance with a complete notice or reclamation plan; or (3) the lands were disturbed by a prior operation for which there is no surety, no legally responsible entity or person, and which lands are not necessarily or incidentally intended to be affected by the mining operations as described in the Complete NOI.

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3. The Operator shall be responsible for reclamation of all such Lands Affected regardless of errors or discrepancies in the maps or legal descriptions provided with the NOI which are intended to assist in determining the location of the mining operations, to describe the areas of disturbance, and to assist estimating the amount of surety required.
4. The Operator prior to commencement of any mining operations and as a precondition to the rights under the Notice of Intention shall provide a surety in a form permitted by the Act and in an amount sufficient to assure that reclamation of the Lands Affected will be completed as required by the Act. The Surety shall remain in full force and effect according to its terms unless modified by the Division in writing. A copy of the agreement providing for the Surety for the reclamation obligations herein is included as **ATTACHMENT A** to this Contract.
5. If the Surety expressly provides for cancellation or termination for non-renewal:
- A. The Operator shall within 60 days following the Division's receipt of notice that the Surety will be terminated or cancelled, provide a replacement Surety sufficient in a form and amount, as required by the Act, to replace the cancelled surety; or
- B. If the Operator fails to provide an acceptable replacement Surety within 60 days of notice of cancellation or termination, the Division may order the Operator to cease further mining activities, and without further notice proceed to draw upon letters of credit, to withdraw any amounts in certificates of deposit or cash and/or any other forms of surety, and to otherwise take such action as may be necessary to secure the rights of the Division to perfect its claim on the existing surety



for the purpose of fully satisfying all of the reclamation obligations incurred by the Operator prior to the date of termination, and the Division may thereafter require the Operator to begin immediate reclamation of the Lands Affected by the mining operations, and may, if necessary, proceed to take such further actions as may be required for the Division to forfeit the surety for the purpose of reclaiming the Lands Affected.

6. The Operator's liability under this Contract shall continue in full force and effect until the Division finds that the Operator has reclaimed the Lands Affected by mining operations in accordance with the Act and regulations, as amended. If the mining operations are modified or for any other reason vary from those described in the Complete Notice of Intention, the Operator shall immediately advise the Division, and the Notice of Intention shall be revised and the Surety amount shall be adjusted as necessary.
7. If reclamation of a substantial phase or segment of the Lands Affected by the mining operations is completed to the satisfaction of the Division, and the Division finds that such substantial phases or segments are severable from the remainder of the mining area, Operator may request the Division to find that Operator has reclaimed such area. If the Division makes such finding, Operator may make request to the Division for a reduction in the aggregate face amount of the Surety, and the Division may reduce the surety to an amount necessary to complete reclamation of the remaining mining operations as anticipated by the Complete Notice of Intention in accordance with the requirements of the Act and regulations, as amended.
8. Operator may, at any time, submit a request to the Division to substitute surety. The Division may approve such substitution if the substitute surety meets the requirements of the Act and the applicable rules.
9. Operator agrees to pay all legally determined public liability and property damage claims resulting from mining operations, to pay all permit fees, to maintain suitable records, to file all required reports, to permit reasonable inspections, and to fulfill all sundry reporting requirements applicable to the mine as required by the Act and implementing rules.
10. Operator agrees to indemnify and hold harmless the State, Board, and the Division from any claim, demand, liability, cost, charge, suit, or obligation of whatsoever nature arising from the failure of Operator or Operator's agents and employees, or contractors to comply with this Contract.
11. If Operator shall default in the performance of its obligations hereunder, Operator shall be liable for all damages resulting from the breach hereof including all costs, expenses, and reasonable attorney's fees incurred by the Division and/or the Board in the enforcement of this Contract.

12. Any breach of a material provision of this Contract by Operator may, at the discretion of the Division, in addition to other remedies available to it, result in an order by the Division requiring the Operator to cease mining operations, and may thereafter result in an Order, subject to an opportunity for notice and hearing before the Board, withdrawing and revoking the Notice of Intention, and requiring immediate reclamation by the Operator of the Lands Affected or forfeiture of the Surety.
13. In the event of forfeiture of the Surety, Operator shall be liable for any additional costs in excess of the surety amount that is required to comply with this Contract. Upon completion of the reclamation of all of the Lands Affected, any excess monies resulting from forfeiture of the Surety shall be returned to the rightful claimant.
14. The Operator shall notify the Division immediately of any changes in the Operator's registered agent, the Operator's address, form of business, name of business, significant changes in ownership, and other pertinent changes in the information required as part of the Notice of Intention. Notwithstanding this requirement, any changes to the Notice of Intention, and any errors, omissions, or failures to fully or accurately complete or update the information on the Notice of Intention, or the attached maps, shall not affect the validity of this Contract and the rights of the Division to enforce its terms.
15. If requested by the Division, the Operator shall execute addendums to this Contract to add or substitute parties, or to reflect changes in the Operator, Surety, and otherwise modify the Contract to reflect changes in the mining operations as requested by the Division. All modifications must be in writing and signed by the parties, and no verbal agreements, or modifications in any of the terms or conditions shall be enforceable.
16. This Contract shall be governed and construed in accordance with the laws of the State of Utah.

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The signatory below represents that the Operator, if not a natural person, is a properly organized entity in good standing under the laws of Utah and the United States, is registered as an entity authorized to do business in the State of Utah, and that he/she is authorized to execute this Contract on behalf of the entity as Operator.

OPERATOR:

Red Leaf Resources, Inc.  
Operator Name

By Dr. James Patten  
Authorized Officer (Typed or Printed)

CEO  
Authorized Officer - Position

[Signature] 4/18/08  
Officer's Signature Date

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STATE OF Utah

COUNTY OF Salt Lake SS:

On the 18<sup>th</sup> day of April, 2008, Dr. James Patten  
personally appeared before me, who being by me duly sworn did say that  
he/she is an officer (owner, officer, director, partner, agent  
or other (specify)) of the Operator Red Leaf Resources and duly  
acknowledged that said instrument was signed on behalf of said Operator by  
authority of its bylaws, a resolution of its board of directors or as may otherwise  
be required to execute the same with full authority and to be bound hereby.

[Signature]  
Notary Public  
Residing at 6985 Union Park Center #375  
Nov. 1<sup>st</sup> 2011 Cottonwood Hts. UT  
My Commission Expires: 84047



DIVISION OF OIL, GAS AND MINING:

By John R. Baza  
John R. Baza, Director

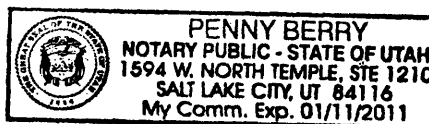
Date 5/8/08

STATE OF Utah )  
COUNTY OF Salt Lake ) ss:

On the 8<sup>th</sup> day of May, 2008, John R. Baza  
personally appeared before me, who being duly sworn did say that he, the said  
John R. Baza is the Director of the Division of Oil, Gas and Mining,  
Department of Natural Resources, State of Utah, and he duly acknowledged to me that  
he executed the foregoing document by authority of law on behalf of the State of Utah.

Penny Berry  
Notary Public  
Residing at: Salt Lake

1/11/2011  
My Commission Expires:



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## **FACT SHEET**

**Commodity:** Oil Shale

**Mine Name:** RLR Site # 6

**Permit Number:** S/047/096

**County:** Uintah

**Disturbed Acres:** Five acres

**Operator Name:** Red Leaf Resources, Inc.

**Operator address:** 6985 Union Park Center, # 375 Cottonwood Heights, UT 84047

**Operator telephone:** 801 878 8100

**Operator fax:** 801 878 8101

**Operator email:** jpatten@ecoshale.com

**Contact:** James W. Patten

**Surety Type:** Cash

**Held by (Bank/BLM):** DOGM

**Surety Amount:** \$22,300

**Surety Account Number:** n/a

**Escalation Year:** 2013

**Tax ID or Social Security (for cash only):** 20-8068743

**Surface owner:** SITLA

**Mineral owner:** SITLA

**UTU and/or ML number:** ML 50151

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RED LEAF RESOURCES, INC.

Utah Division of Oil, Gas and Mining

Surety Bond ML #50151

4/21/2008

22,300.00

1795

Cash RECEIPT

Date 4.30.08

MINERALS BOND \$22300

Permit Number	S 047 096
Operator	RED LEAF RESOURCES INC
Received by	BO
Signature	I confirm the dollar amount of this check is correct. <u>BO</u>

RECEIVED

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DIV. OF OIL, GAS & MINING

22,300.00